

Notice of Allowability

Application No.

09/857,552

Applicant(s)

BURG ET AL.

Examiner

Monica A Fontaine

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Phone Interview 2 Nov 2004.
2. ☒ The allowed claim(s) is/are 3-6,9 and 11.
3. ☒ The drawings filed on 05 June 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 110404.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

This office action is in response to the Amendment filed 24 August 2004.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Heather Barnes on 3 November 2004.

The application has been amended as follows:

Claim 9 has been replaced with the following:

--An extruder screw and flow channel head assembly comprising an extruder having a cylindrical barrel with a feed end and a discharge end, said discharge end being attached to a flow channel head containing a flow channel for carrying rubber from said extruder to a suitable die, a screw nose on said extruder screw positioned in a transition space at said discharge end of said barrel wherein said screw nose has a radially expanding upstream portion providing a conical surface of increasing diameter in the direction of flow of said rubber for maintaining said rubber in working engagement with said screw nose and the cylinder wall of said cylindrical barrel, whereby the pressure on said rubber is maintained in said transition space, said cylindrical barrel having a constant diameter, wherein said screw and screw nose rotate about a central axis

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without reciprocating movement in said cylindrical barrel as it moves said rubber from said feed end to said discharge end, further characterized by said screw nose having a downstream portion with a conical surface of decreasing diameter in the direction of flow of said rubber spaced from an opposing tapered wall of said flow channel head for maintaining working engagement of said rubber with said conical surface of said screw nose and said tapered wall of said flow channel whereby pressure on said rubber is maintained to prevent expansion of volatiles in said rubber.--

Claim 11, line 2, "10" has been changed to --9--.

Claim 5, line 2, "10" has been changed to --9--.

Allowable Subject Matter

Claims 3-6, 9, and 11 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art of record neither teaches nor suggests the claimed extruder screw nose that has a radially expanding upstream portion providing a conical surface of increasing diameter in the direction of flow and a downstream portion with a conical surface of decreasing diameter in the direction of flow that is spaced from an opposing tapered wall of the flow channel, wherein the screw and screw nose rotate about a central axis without reciprocating movement in a cylindrical barrel as it moves rubber from a feed to a discharge end, and wherein pressure on the rubber is maintained between the conical surface of the screw nose and the tapered wall of the flow channel to prevent expansion of volatiles in the rubber.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patent is cited to further show the state of the art with regard to extruder screw noses in general:

U.S. Patent 4,173,445 to McKevey et al.

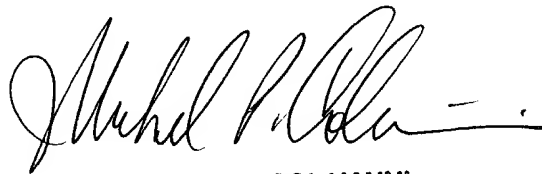
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A Fontaine whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Maf
November 4, 2004



MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER